

# *The* **MUELLER** **RECORD**

APRIL, 1928

*Annual Employees' Meeting*



FIRM MEMBERS EXPLAIN COMPANY POLICIES



## BARNEY BUYS BUICK

### Chief Inspector Now Rivals Joe Mayhew as Auto Nabob

For many years Barney Marty, our amiable and agile chief inspector, was content to wend his way home on foot or if he had more time he would wait for the street car and eventually arrive in time for supper.

However, when his work as inspector required his presence at Plants 2 and 3, as a matter of necessity he learned to drive one of the Ford cars (model T) that the Company kept. With some trepidation at first, but with gradually increasing confidence he was able to navigate the flivver across town and thru traffic. Gradually he gained confidence in himself and enjoyed motoring.

About this time numerous automobile salesmen began to regard him as a prospect and he was beset by telephone calls, by visits of salesmen and by various enterprising efforts to get his attention on different makes of cars. But all to no avail. Barney reasoned that since he did not get married until he had a house in which to keep his wife that he would not get an automobile until he had a garage which to keep a car. In due time there appeared on the neat lot back of his residence a neat brick garage of the same finish and architecture as his house.

The salesmen renewed their efforts. Mr. and Mrs. Marty had many personally conducted tours about Decatur while they listened to enthusiastic salesmen enlarge upon the merits of their respective cars. In reality Barney was waiting for the new Ford to appear and as far as he could see he had plenty of time to consider the matter.

At this juncture, however, fate interposed in the person of Joe Mayhew of California, who had a new model Buick and he took Barney for a ride. Barney was more impressed than he would admit and the Buick salesmen got busy, but they could not sign him up. Our engineer of tools and operations, Chester Hathaway told Barney of a certain slightly used Buick car that could be bought at a bargain. Barney investigated and bought.

Now the week-ends cannot come often enough to enable our worthy inspector to view the changing beauties of nature from the front seat of his Buick sedan. Mrs. Marty had laid down a speed limit of 35 miles which the enthusiastic Barney does is having the time of his life motoring.



## BRASS CHIPS

E. N. Harlow of the Foundry Inspection division, has been transferred to the Assembling Department where he looks over the work on the conveyor lines.

C. W. Ward, formerly of the Brass Shop, has been transferred to the Engineering Department where he maintains contact between that department and the shops.

Ted Anderson, of the Production Department (noted athlete) has been transferred to the Cost Department.

The girls in the Production Office remembered the birthday of Dorothy Hill on April 17th with an appropriate gift which Dorothy declines to specify.

The boys in the Foundry note that since Odie Walker has been doing time study instead of molding that he wears his shirt when in the foundry. This, we presume, is to afford anchorage for a white collar.

On the evening of Friday, April 13th, the Decatur Chemistry Club had a social meeting at Mueller Lodge. A banquet was served by Mrs. Rost after which the party played bridge. The following members of our organization belong to the group: A. V. Lawton, L. E. Clark and Margaret Marcott.

William Dean is the name of Barney Riley's little son, born April 11th. He weighed 8 pounds and 6 ounces. This brings Barney's family to five children.

E. A. Waltz of the Metal Pattern Department has traded his home at 1347 West Decatur street, for a suburban place of 2¾ acres on the west Grand Avenue Road, a quarter of a mile beyond the Oak Grove school. Most of this land is in orchard. Ed will have plenty of work to occupy his leisure time now.

Henry Leipski has been transferred from the Machine Shop to the Metal Pattern Department. We congratulate Henry on this promotion.

Mrs. Raleigh Taylor, who has been with her parents at Wallenville, Ill., is gradually improving in health and hopes to return to Decatur this spring.

Elmer Russell, John Galla, Bryan Mayall of the Assembly Department; E. Beneze of the Polishing Department, and Hubert Johnson of Department 30 have been working for several weeks in the box storage room, east of College street, changing the washers in compression faucets.

John Murphy, formerly of the Engineering Department, made a flying visit to Decatur, April 17th. He was returning from New York to Detroit and stopped off to see his parents in Decatur. He is now employed by the Chrysler Corporation in the central planning department. He was married soon after leaving his work here. He says that he likes his job and Detroit.

J. A. Dill of the Assembling Department, has been on time to work every day for twenty-six years. In our opinion he has hung up a record. Let's see if there is anybody else can beat it. He likes the old shop so well that he is there by 6:30 nearly every morning.

Flossie Poe from the same department also has a record for steady work and no tardiness. She has only missed a day and a half in the last two years and that was to attend a funeral.

# THE MUELLER RECORD

VOL XVII

APRIL, 1928

NO. 188

This issue of the Record is a Group Bonus Number. It is given up largely to this new plan, beginning with the article immediately following and continuing with the detail explanation of Works Manager L. W. Mueller. Every employee should read these articles, not only read them, but study them until they are understood. If any detail is not understood, ask your foreman, or the time-study man, or C. F. Roarick, chief of the Standard Department.

## ✚ GROUP BONUS SO FAR

Gradually the group bonus plan is extending itself into the shops. The principles underlying the plan were fully explained by Lucien Mueller at the last series of Departmental Meetings held early in April. A basic change in wage payment method such as this naturally requires many adjustments in the shops and accounting departments concerned.

The first groups began to operate in the Regulator Department of the Machine Shop, December first, and was applied to 21 men. There were three groups: the machine operators, the assemblers and the testers. For the three months ending March 15th, the machine operators increased their earnings on the average of \$3.07 per pay or 3.3c per hour. The average increase for assemblers was \$3.23 or 3.6c an hour. The testers who were not on bonus full time increased their earnings \$2.54 per pay or 2.8c per hour. These increases have been earned in spite of the fact that work was rather short and that the system was new. The output could be materially increased if the orders demanded the full efforts of the men.

Since the bonus has been longer established in this shop than elsewhere we can come nearer judging what it can do there than in a department where they are just getting acquainted with it. Martin Stratman, the foreman, observes: "My experience leads me to believe that it will result in increased earnings for nearly all the employees in the group. It requires patience, tact and work to get the plan started but the results justify the effort and grief. It does help the men to do better work and more of it and they work together to improve each other's production. Some men who were only ordinary workers are now much better producers. This plan stimulates the men to give closer and more intelligent attention to their work, and they insist on having efficient machines and equipment.

"The records kept on production eliminate guess work and help us to actually measure the output of a man, a group or a department. Men under group bonus require less supervision."

One man who was much discouraged and thought some of quitting when group bonus was established, now believes firmly in the benefits of the plan.

Albert May, turret lathe operator, says, "You do more work and get more for it. It benefits both us and the Company."

Julius Pottack who works beside him, remarks, laconically, "I am satisfied with it." Ed Hoffman, an assembler says, "The group bonus helps everybody. I have made a bonus six weeks out of eight."

Warren Hall, a packer, says, "Group bonus gave me my chance. I was a new man and the bonus raised my hourly rate eight cents."

Leo Wiant, the clerk, wishes that he were on the bonus. He observes that the men make a game out of production which makes their work easier and more interesting. There is a new spirit in the department."

Time studies have been made in the Core Room, Foundry and the Grinding Department. In the Core Department, four groups were formed. In the Foundry the molders are on bonus and in the Cleaning Department the grinders. In some cases, but not in all, substantial bonus has been earned. It is too early at this date to give definite figures but the foremen and a number of the workmen believe that it will mean for them a substantial increase in earnings. Here the plan is hampered somewhat by lack of sufficient work for the men to reach their full capacity of output.

However, this is a good time to get broken in on a method of efficiency so that when capacity production is demanded we will be ready for it. The Mueller Company officials, the superintendent and his assistants, foremen, time study men and many of the workers believe that group bonus will increase employees' earnings, and will be mutually beneficial to the men and the Company.

In 1919 when all the molders in the foundry were on day rate of 50c an hour the production hung at about 80 molds a day. In nine hours a man earned \$4.50. Piece rates were suggested. The cry went up that the men could not make their day wages on piece rates. As a matter of fact most of the men were soon able to make 100 molds and many went to 150. Ambitious men ran their production up to 200 molds and official records show 300 molds have been made in a single day. On the average, however, the molders, who, on day rates, made \$4.50 were averaging \$6.50 a day or \$33.00 a week, while others made from \$40.00 to \$50.00 a week. When well established, the group bonus will probably go beyond the piece rates.



## GROUP BONUS EXPLAINED

By L. W. Mueller

Only two departmental meetings were held this year. At both of these the Group Bonus system was the principal subject discussed. The first meeting was held Wednesday, April 4th, and the second, Thursday April 5th.

The attendance at each of these meetings was unusually large, due to the changed plans. The company on each occasion closed the plant at 4 p. m. without loss of pay to employees. The final hour was given over to the meetings. Another change was dividing the force into two groups instead of a greater number of small groups. No dinners were served. At the conclusion of the session the employees went to their homes for their evening meal as usual.

Following is the detailed explanation of the bonus system as made by Works Manager L. W. Mueller:

### Meeting Competition

Generally speaking, the last few years since 1923 have been ones of declining prices with wages and salaries paid to workers remaining unchanged and in some instances increased. Therefore, it must be evident that profits of industry have gradually been more and more difficult to maintain. This has been called 'Profitless Prosperity.' Manufacturers have succeeded in meeting these conditions in two ways.

1. A very rigid program of economy of general expenses.
2. Increased production per worker by means of
  - (a) Improved machinery and equipment.
  - (b) Wage incentive plans.

Our plant is no exception and we have had to do the same things. As for the first item, we have been practicing the strictest kind of economy in all ways. The Sales Dept. has cut advertising and sales expense, traveling expenses, etc. In the factory, we have repeatedly called to your attention increase in use of supplies such as soap, toilet paper, paper towels, light bulbs, lights left burning where not needed, excess use of buffing wheels, compounds, and etc.

We have strived constantly to keep down losses, also the inventory of materials, supplies, brass parts, etc., only making what we needed as we have had use for them and all of this has had its influence in reducing expenses.

Now, as to the second item, increased production per worker by means of improved machinery. You no doubt realize we have been changing old machinery and tools and buying new ones so that Engineering Dept. have been doing their part.

The other item, wage incentive plan, is the

one we are now working on and the one which I wish to go into more fully, that you may more thoroughly understand it with its objects, how it operates.

### Wage Payment Plans

Most of you know by now that the wage incentive plan we have adopted is that of Group Bonus. You no doubt wonder why and because it affects you directly and the

## START NOW

### Savings Account in Employees Investment Plan

### Employment Office, Noon After Pay Day

fact that you have probably discussed it with fellow employees, I am going to take this opportunity to explain it to you in detail.

First, I think I should explain why group bonus was selected in preference to other plans that are in existence.

It would be rather hard to enter into a discussion upon the comparative merits of day work, piece work and group bonus without first touching slightly upon the general problems of the rewarding of labor. The problem of rewarding of labor is perhaps the oldest and most perplexing problem in industry. As far back as industrial history carries us, we find records of continual argument over this subject.

We also find that from the very beginning of these arguments considerable study has been devoted to these problems, with the results that today we have a very wide assortment of wage payment plans in use. We have just as many more plans that have been thrown into the discard. All of these plans, when you get right down to the heart of them, have for their purpose the offering of incentive in some form or another to the workmen who accomplish a reasonable day's work.

In order to get a clear picture of the comparative merits of different plans of wage incentive, it seems to be important to put down the essential elements necessary for a good wage incentive plan.

1. The plan should be fair to both the employer and employee and should serve to promote confidence and understanding between them. There are many ways in which wage payment plans can be unfair to either party or both and it is not necessary to discuss them in detail at this time.

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::: *Home Bureau Visitors* :::



The Home Bureau Women of Macon County held a convention on house-keeping matters under the direction of Miss Sonder, Home Management Specialist, University of Illinois. They are deeply interested in plumbing and sanitation and made a trip through the Main Plant and Vitreous Plant. A special display was made of our plumbing line and Carl Draper explained the use of various fittings.

2. The second essential is that the plan should offer sufficient incentive in the way of additional compensation to encourage an employee to materially increase his normal day work effort. It is a well known fact that the average workman can materially increase his normal day work effort if he cares to do so and if he has the proper incentive for doing it.
3. The plan should be unlimited in its scope. In other words, you should be able to apply it from the sweeper up to the management.
4. The plan should be flexible allowing it to be modified to suit prevailing conditions. A system laid out to work satisfactorily in one department will not work in another department without some modification. What you actually want is a plan that can be molded to suit your particular condition. And I think we agree that any incentive plan is of value only if it fits our particular condition.
5. The plan should promote team work. I think we all have seen or heard of cases where baseball and football teams made up of individual stars have been practically wiped off the map by another team who was slightly inferior but who had real team work. The same thing happens every day in business because a slip in one department or connecting link between departments may cause a terrible mix-up of all the other departments and materially delay their work. I am sure that you will all agree and there should be no argument between you or me or anyone else as to the value of real team work in any enterprise.
6. The plan should be simple in its operation and require a minimum of clerical help in its administration. This is very important because reduction of cost is the object sought.

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The cover picture shows Departmental meeting at which L. W. Mueller explained the Bonus. It was taken so as to include the speaker and chairman. The above picture was taken to show as much of the crowd as possible.

### Day Work

I have summarized these six essentials on large cards and posted them here on the wall so that you can see them and keep them constantly in mind as I discuss the relative merits of the different plans and show you why we have selected Group Bonus to be put into our factory here.

There are only three fundamental wage incentive plans, namely, Day Work, Piece Work and Group Bonus and it is my object now to compare the three of them in their main essentials in order to show which of them is most adapted to our work here and further to show you why we have selected Group Bonus.

Day Work being the oldest plan of the three seems the logical place to start. In the Day Work Plan, the workman is paid a certain sum of money for a given period of time and the rate may be quoted as so much per hour, per day or per week. Day Work is paid exclusively for the workmen's time with no regard for the quality or quantity of the work turned out except in so far as checked up in a rather hap-hazard way by the foreman or supervisor and in many instances personal feelings enter into these relations. Suppose that you put the shoe on the other foot and consider yourself in the position of the employer. Just imagine yourself walking into the employment office of this factory and telling: Mr. Langdon you will go to work and put in a definite amount of your time and deliver a definite amount of production with the understanding that at the end of this time he shall pay you whatever amount he sees fit. That is exactly the position of the employer, when paying day work wages to the employee, as he is not guaranteed any definite production.

I believe then that we can agree that day

work does not meet the essential No. 1. We will therefore go on into essential No. 2.

Day Work comes so far from meeting essential No. 2 that it seems unnecessary to discuss it further and we will therefore discuss essential No. 3 and No. 4.

I will admit that it serves No. 3 and No. 4 in every way but on the other hand it materially increases the cost of manufacture and we will now discuss essential No. 5.

In essential No. 5, I must admit that Day Work under ideal conditions in a very small factory where the owner is in the shop and knows each of the workmen and is with them every day and they know him very well, that you will undoubtedly get considerable team work. However, as the plant grows larger, as large as our plant is today, the owner and executives are bound to lose this close contact with their workers and this ideal condition no longer exists, then the team work fades away into insignificance. And therefore, essential No. 5 in our plant today cannot be met by Day Work and we will go on and discuss essential No. 6.

Day Work meets our sixth essential in that the plan can be simple in its operation and should require a minimum amount of clerical help in its administration.

You may think that in as much as Day Work compares rather favorably with some of our essentials, namely, No. 3, 4, and 6, that it may not be such a bad plan after all, but don't forget that Day Work did not meet our first essential to any great extent and does not meet essential No. 5, nor in any degree does it meet our second essential, the one that in this day of constant lowering of costs seems to me to be of the utmost importance.

Day Work then fulfills 50% of our essentials for a good wage incentive plan.



Now we will discuss Piece Work, which seems to me to be the most logical one to discuss next. In this plan the workman is paid a definite price for each operation or the number of pieces produced and the rates are usually established thru time study although, in many factories they are the results of guess-work or established by an individual who actually does the work. Time Study is far the more accurate way to do it, but at the present time is still susceptible to a large amount of inaccuracy except under ideal conditions which are very hard to control and keep in existence. Piece Work is not a one-sided bargain like Day Work, but it may be as nearly inefficient as Day Work if either the time or the rate is not fairly set or not properly controlled after once having been set, and my experience here and in other plants at other times, in getting rates by Time Study is that it is a very difficult job to establish them on an absolutely 100% accurate basis as there are so many different things that enter into the factors that effect the time. I will show this to you later.

#### Piece Work

Piece Work is very adaptable to cases where a large number of parts of exactly the same kind are to be made day after day and week after week so that a large amount of time can be spent in the time study and time analysis of the operation. Then in this case, Time Study can be made extremely accurate and a very fair rate established, also a very nice control can be maintained over any changes of the operations that might effect the rate, but in a plant similar to ours here where we have so many different kinds of jobs and many of them only of a very short run, there are bound to creep into the time studies and established rates, many discrepancies both ways, that is, the rate is too high and the rate will be too low.

Comparing Piece Work then with the essentials which we have on the large cards posted on the blackboard, we have them as follows:

1. Considering essential No. 1, we find, in a factory where the jobs are of large amounts running a long period of time and the rate can be set on a very satisfactory basis, Piece Work is very fair and can be easily handled but for our particular plant here where we have the short order jobs, it does not meet this essential.

2. Piece Work certainly does meet essential No. 2, but only within its limits of application, that is, where the rates are established on a fair basis, and this then brings us to essential No. 3, that the plan should be unlimited in its scope.

3. It is rather easy to see that Piece Work would be extremely difficult and probably impossible to apply in the average store-room, stock-room, shipping dept., tool storage dept., trucking and other indirect labor departments which if you will analyze them

you will find this indirect labor makes up a large part of the expense of any manufacturing plant and incidentally is one feature that is very hard to control and as I see it, is one of the very biggest flaws in Piece Work.

4. Now then, considering essential No. 4, Piece Work does not meet this essential as it is not flexible and cannot be readily modified to suit prevailing conditions.

5. Considering essential No. 5, that it should promote team work, I cannot see how Piece Work can in any manner whatsoever, promote team work and if anything, it discourages it, making the individual more of an individual still.

6. Now to discuss essential No. 6, that is, an ideal plan should be simple in its operation and require a minimum amount of clerical help in its administration. Piece Work is decidedly simple in its operation but it does require a considerable amount of clerical help and an awful lot of inspection and supervision and in a plant of any size it is very easy to build up a tremendous force to handle this kind of work.

Going back then and summing up the different essentials, I believe we can agree that Piece Work comes a little bit nearer to meeting an ideal incentive wage plan, but still is not perfect in all respects.

Piece Work fulfills then 16% of the essentials for a good wage incentive plan.

We are now ready to consider the third and last plan, Group Bonus.

#### Comparisons

1. Considering essential No. 1, this plan as I see it is considerably fairer than Day or Piece Work as the ENTIRE organization including indirect labor and supervision is paid for results which is certainly impossible on Day or Piece Work. The high and the low rate which may be set and become out of date because of slight changes in the operation or the length of the job that was run one time and then was changed at another time, etc., all of these are equalized in Group Bonus, and there is a tendency for the high and low rate to balance up and equalize the other making a nearer, fairer balance in the end and the good or bad does not fall upon an individual. The method of setting the standard Time and base wage rate is such that the employee is guaranteed a certain wage rate to begin with and has the additional opportunity of making considerably more money if he will cooperate and help his group to produce.

2. Considering essential No. 2, it certainly meets with this essential as it offers positive incentive for all the workmen including indirect labor and supervision in an organization to do their very best.

3. It meets essential No. 3 almost 100% and in this respect takes care of situations which have been extremely hard to deal with in any other incentive wage payment plan of any kind as it permits the including of

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### *Dr. V. M. Long*



Dr. V. M. Long has been with us for some weeks and employees are getting acquainted with him and the valuable service that he can render.

supervisors, foremen, asst. foremen and other executives.

4. The plan certainly meets our 4th essential as in every case we can set it up a little different to meet those particular conditions.

5. The plan certainly promotes team work in all departments and therefore meets our essential No. 5. This has been proven many, many times in many plants in U. S.

6. This plan certainly meets essential No. 6 as it is very simple and once established requires a very minimum amount of clerical, supervisory and instructive help. In fact, this is one of the very greatest arguments for Group Bonus, that you can eliminate the indirect labor necessary to instruct, inspect and check the operators and instead put that money back into direct labor.

#### **Group Bonus Selected**

Summing up Group Bonus, then, it seems to meet all of our essentials and therefore becomes our ideal wage incentive plan.

Group Bonus meets our 6 essentials—100%.

I would like to point out further good points in favor of the Group Bonus.

1. It unifies purpose of all employees in the group.
2. It makes cost reduction the goal of all workers direct and indirect.
3. It improves quality as bonus is paid on good output only and penalizes for poor work.

4. It makes each man interested in every other man's output and quality.
5. It eliminates drones by making the loafer and staller unpopular with the gang.
6. It causes the brightest and most experienced workers to share their knowledge with those less gifted and experienced.
7. It controls production and the size of the gang as excess men reduce bonus earnings.
8. It gives greater incentive to supervision as considering it from the foreman's viewpoint, the bonus earned by the foreman will depend on output as compared to labor and certainly the foreman will then have to answer to his men for a failure to provide material and proper equipment at the right time.
9. Sweepers, truckers, oilers, helpers, office workers and other men are always interested in keeping the productive workers going.
10. Reduces the supervision and inspection as each man is answerable to the group as well as to the foreman in matters of discipline, industry, good quality and etc.
11. Ingenious contrivances and things for speeding up the work remain the property of the group instead of being carried away as the secret of the inventor who on leaving the Company as a Day or Piece worker generally carries with him certain contrivances.
12. Bonus earnings at the end of each month indicate closely the cost of product.

#### **How It Works**

Now that I have discussed with you the three fundamental bonus plans, I wish to go further into detail and explain to you just how we are installing group bonus in this plant and how it will effect you men.

Group bonus, or any wage incentive plan is of necessity based upon the establishing of standard times to perform certain duties or operation. These standard times are set in two ways.

1. Having an expert operator actually do the job at average speed and take his output as the standard.
2. By means of a stop watch take the actual time of several average operators of a department to do the job and use the average of that time as the standard.

We have chosen the second method of using stop watch because it is faster and far more accurate.

We have selected for our time study work some of you men out of the factory, those who have worked with you and actually performed most of the jobs they are timing.



**PLEASED WITH CABLEGRAM**  
**Mrs. L. M. Cruikshank Acknowledge Con-**  
**gratulation on Birthday**

Mr. and Mrs. Frank Cruikshank are still traveling in Europe and will be there a greater part of the summer. Mrs. Cruik-



Mr. and Mrs. Frank W. Cruikshank at famous St. Marks, Venice.

shank's birthday was the occasion of a congratulatory telegram from the Foreman's Club and her pleasure over this thoughtfulness is expressed in the following letter:

"Vienna, Austria, March 22, 1928.

"Foreman's Club, Mueller Co.,

"Dear Friends:

"I can hardly find words with which to express to you my appreciation of your thoughtfulness in remembering me on my birthday, especially in this far distant land, and as one leaves life's milestones behind, each added one only tends to make attentions of that kind even dearer, if anything more greatly appreciated.

"Mr. Cruikshank and myself are having a very wonderful trip. The old world is so filled with the day of long ago, and only the hand work of our brothers remain to remind us of his great pioneer work to make for us such a civilization as we have today.

"We are leaving Vienna Saturday for Prague, then to Berlin.

"Please accept my most sincere thanks and appreciation for your message, which was handed me at 5 p. m. this 21st.

"MRS. L. M. CRUIKSHANK."

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So we believe they have a good idea of what is fair to you and to the Co., and what constitutes a fair day's work. These men are not outsiders but are one of you and ones who you have known for a long time, can talk to and trust.

I would like to say right here, men, that the success of any wage incentive plan or other similar system is dependent upon mutual trust and confidence in each other. I mean you must trust us and we must trust you and when conditions arise that seem unfair let us get together and thrash it out to a fair and just settlement.

Very well, the next step after taking standard times for every operation on each part or job is to add to the stop watch time certain allowances. Remember in taking the time by stop watch all lost time is eliminated and only the actual time of performing that operation is recorded. Alright then, the actual time of performing the operation having been taken we add to that time ten per cent for personal allowance. That means for getting a drink, going to wash room, etc. This amount of time has been found to be right by a study of industrial engineer in many plants over the entire U. S. and is almost universally used in establishing time standards. Another allowance is added to the original time for such things as tool trouble, equipment trouble, and etc., which amount depends on the job and equipment being studied. A third allowance is added to the original time for set up time on that particular operation and this varies according to the equipment and job being studied.

All these times are then added together and the total is what we establish as a standard time or rate for the production of that job or operation, for example:

**EXAMPLE**

|                                 |                 |
|---------------------------------|-----------------|
| Original time taken at least    |                 |
| 10 different times and averaged | ..... .25 hrs.  |
| Personal allowance              | ..... .025 hrs. |
| Tool trouble                    | ..... .063 hrs. |
| Set up time                     | ..... .05 hrs.  |

|                        |                 |
|------------------------|-----------------|
| Standard Time of Rate— |                 |
| Total                  | ..... .388 hrs. |

In other words we consider that time, .388 hrs. per piece, as the time an **average** operator should take to produce that piece under the same conditions as existed when the time study was made.

Remember now this is an average operator's time, not fast and not slow, just average. This time then is what we call 100% efficiency. In other words, an operator performing this operation in this time would be 100% efficient and as shown later the group of which he is a member would be paid 20% bonus for this performance.

It certainly seems to me that is a very fair way to set a rate and the rate so set would be perfectly fair to everybody.

**Formation of Groups**

The second step in establishing group  
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## VISITORS FROM U. OF I.



A group of Faculty Men and U. of I. graduates, School of Commerce, on a visit to Mueller Factory. The visitors had lunch with us and were given every opportunity to familiarize themselves with Mueller methods. Two Chinese students were in the party.

## CORE ROOM NOTES

Wilma White of the Core Department and her fiance, George Turner, of Detroit, were quietly laying their plans to be married next June. George, however, could not get a vacation in June as he hoped but was able to get one the middle of April. Thereupon he telegraphed to Wilma, "Wilt thou." "I wilt", says Wilma and the next day, April 17, they were married at the bride's home, 766 W. Waggoner St. It appears that the girls of the Core Department had planned a shower for Wilma that evening. They offered to give the wedding right of way but Mrs. White asked the girls to come and have it after the ceremony, which they did.

At nine o'clock that evening an automobile parade was formed and the happy couple and their friends drove about town for an hour. For the remainder of the week the couple visited the groom's people in southern Illinois. On Saturday, April 21, they returned to Detroit where they will make their home.

Henry Gilbert sold his house at 2150 North Union street, and has moved to 2640 North Church street.

Katie Wenger resigned to take a position in the office of the Schudel Laundry.

Mrs. Grace Lilly and Merle Lilly, her husband, of Plant 2, have given up their work here and have gone to Chicago.

After the death of John Hodges several members of the Core Department hastened to get into the group insurance plan.

Henry Fletcher says, "If I had as much hair on my head as Joe Cheetham has on his upper lip I would have it shaved off at once."

Joe's come-back to this remark is a sarcastic "sour-grapes."

## BACK FROM ATLANTA

Walter Coventry Drives Dick Moore's Made-to-Order Reo

On April 17th, Walter Coventry of the Shipping Department took the train for Atlanta, Ga., where the Southwestern Water Works Convention was in session. On his arrival there he met Dick Moore, Wm. Ford and W. L. Jett.

For several months past Dick Moore has been traveling through the southeast driving a Reo Speed Wagon, equipped with a special display of Mueller copper pipes. Dick has recently taken a territory in North Carolina and Walter drove the speed wagon back. He made the return journey in three days and arrived on the afternoon of April 22nd.

## THE WRONG TIME TO EAT PEANUTS

C. M. Kemplin of the Machine Repair Department, likes peanuts, perhaps better than they like him. One evening he ate freely of peanuts and the next day while standing at his lathe in the Machine Repair Department, he had a spell of indigestion, fainted and bumped his head twice on the way down. He was laid up for three days, part of the time in the hospital. Thus, this seeming accident was really caused by indiscretion in eating.

## LIVE IN TANK



Interior of specially constructed tank where Mr. and Mrs. Robert Mueller live while taking medical treatment. Looks like a Pullman.

Juanita McKaig, twelve-year-old daughter of Walter McKaig, of the Assembly Department, died March 31, at Portland, Oregon, after an illness of six weeks. For further particulars see the Decatur Review or the Decatur Herald, March 31.

Mrs. Nancy Jane Hendrickson, the mother of G. A. Ledbetter of the Assembly Department, died at Mattoon, Ill., April 19th. Mrs. Hendrickson had gone to Mattoon for a visit to her brother and while there took the flu and died. For the past two years she had made her home with her son George, in Decatur. Burial was at Mattoon.



(Continued From Page Nine)  
bonus is to decide upon what workers shall constitute a group. For deciding this it is necessary to work backwards from the point at which we wish to use for paying or counting output. Also, the sequence of operations performed is a factor, the skill necessary to perform the operators is essential. There is no cut and dried method of selecting a group but it becomes a matter of judgment considering all the factors entering into it.

In the core room we have four groups at present time:

1. High machine core makers.
2. Average machine core makers.
3. Hand Core makers.
4. Core cleaners.

In the foundry we have two groups at present time.

1. High molders.
2. Average molders.

In the grinding room we have one group at present.

1. Grinders.

The third step in group bonus is establishing of base wage rates. I am extremely anxious that you clearly understand this part of it so please pay close attention.

In first place base rate means that you are guaranteed a certain hourly rate called base rate up to 75% efficiency. Therefore, your base rate is the very lowest amount that can ever be paid you and you always have the opportunity for unlimited bonus.

#### Meaning of Base Rate

One thing to remember is that base rate cannot be compared with your old hourly rate formerly paid you. The only rate you can compare your old hourly rate with is the rate you are actually paid when operating on bonus.

You probably wonder why your base rate cannot be compared with your old hourly rate and this is the reason.

Go back a minute and remember how we established standard time rates. It was by adding certain allowances to the average operator's actual production and called 100% efficiency. Very well then, that standard rate being 100% and what an average producer actually did do, it is only reasonable to expect that the average producer should continue to do the same amount and on this basis, the average producers would be paid base rate plus 20%. Very well, then, a man producing an average amount of work should receive an average amount of wage for the kind of work he is doing. This being true then, a base rate on any job would be the prevailing wage rate for an average day's work on that job less 16 2-3% or the other way around the average wage rate for a job would be base rate plus 20%.

In all of this discussion, I have constantly talked of average production and average wage. Don't lose sight of the fact that every group can very easily exceed 100%

## APPRENTICE SCHOOL IN SESSION, J. T. SUTLIFF, TEACHER



These lads are making progress. Interest in their work increases day by day

efficiency by each man being just a little better than the average and your earnings are in proportion thereto. You are not limited to your earnings. It is up to you.

In closing, I wish to show you what the original groups in Dept. 300 have done.

|               | Group 11 | Group 12 | Group 13 |
|---------------|----------|----------|----------|
| Dec. 31.....  | 4.40%    | 10.50%   | 9.00%    |
| Jany. 15..... | 1.95%    | 13.80%   | 6.50%    |
| Jany. 31..... | 10.20%   | 6.30%    | 4.00%    |
| Feb. 15.....  | 8.50%    | 5.74%    | 11.70%   |
| Feb. 29.....  | 5.20%    | .37%     | 8.50%    |
| Mch. 15.....  | 8.50%    | 4.00%    | even     |



#### Shines From the Polishing Department

There is considerable interest in this department in baseball.

Doc Morey came in one morning recently with his overcoat buttoned up to his ears and he remarked that we had had the shortest summer this year he had ever known.

O. R. Curry is in the Decatur & Macon County Hospital recovering from an operation for hernia.

A number of the polishers are on the new conveyor system which has recently been installed just outside the Production Control Office.

The new time clocks seem to have been designed by a left-handed man.

We hope they hold off the opening game of the I. I. I. League until the day light savings is started so we can go.

Duke Kondritz asserts that he will yet show the inspectors how to color chromium plate.

Other Devine is now drumming orders on chromium plated ware.

Geo. Clark, our trucker, has been transferred to Plant 3 and Harold Sarver is trying out the boiler room.

For tips on the election see Luther Morrison.



Arthur Claypool of the Brass Shops had pneumonia which later developed into appendicitis.

## STANDARDS DEPARTMENT



To the group pictured above has been entrusted the important and difficult job of working out the Group Bonus Plan. They have been trained by L. E. Gildner of Ernst and Ernst, and have been selected because of their training, experience and special fitness for the work.

It is their intention to work out the Group Bonus Plan fairly, efficiently and scientifically. They are willing at all times to make any explanations that you may ask for.

Members of the Department are: Charles Tilton, J. T. Sutliff, Odie Walker, L. D. Elam, J. A. Morrison, Cliff Gilleland, C. F. Roarick, Louise Whitehead and L. E. Gildner.

Up to this date, April 25th, the following group insurance claims have been paid: Philip Mueller, \$2,000.00; B. F. Royce, \$500.00; J. L. Hodges, \$1,000.00, and Joe Dutter \$1,000.00. In all of these cases the face of the policy was paid promptly to the widow. To these families, at least, the value of this insurance has been well demonstrated.

Ed Chepan of the Night Tool Room has gone to Detroit.

The following have been transferred to work in the Pottery, Plant 3: Carl Torrence of Plant 2, Creo Talley of the Night Foundry, Thomas Crickman, Wilbur Huddleston, Lawrence Adams, Warren Thomas, Ed Robb, Garlin Buck and Geo Clark of the Brass Shops.

Chas. Durbin has been transferred from the Brass Shops to the Garage as automobile mechanic.

Russell Lowe of Department 18, is now driver of one of the lift trucks.

Van E. Campbell is the ceramist recently employed for the Pottery. He is a young man, married, graduate of the Ohio State University. He came to us from Kalamazoo.

Edward Buck of the Advertising Department, resigned last month to take a position in Ohio. He has been succeeded by Thomas Riggs.

Darrell Stanbury entered the Drafting De-

partment, April 2nd as an apprentice.

Velma Olive has been added to the force in the Office of the Up-Keep Stock Department.

Dan Dunaway has returned to the Construction Department as belt man. He has been on Philip Mueller's farm since last fall. The farm was sold this spring.

Richard Peel has returned to work in the Pottery. Since leaving us last year he has been married.

C. J. Muller, who was injured last summer when he fell from the concrete structure at the Athletic Club dam, has returned to work as a watchman at the Foundry entry. He succeeds J. L. Jolly who goes to Plant 3 as fireman.

Ralph Duncan and Lyle Woodard started as apprentice draftsmen in the Engineering Department, April 25th.

C. C. Braden of Rock Island, called last week. He was formerly one of our tool makers.

P. H. Cruikshank and J. R. Mayhew attended a meeting of ceramists in Washington, D. C., the week of April 23rd.

John Everett is the name of the new baby at the home of W. E. Lewis of Department 9.



## AN EVIL REPUTATION

Bert Jackson wears such an innocent expression and such an honest open countenance, that it seems unkind and unfair not to ask for particulars when he seeks to disseminate information. But those who have had experience with him are cautious to a rare degree and have learned to curb their curiosity.

And it seems all the more unkind when he really has interesting bits of news to peddle, and his friends seem to look at him patiently and wait for him to proceed unspurred by a friendly, "well, what about it?"

The other day during the noon hour, Burt approached a few friends and said, "Too bad about Lockhart wasn't it." Whatever any one may have thought no interest was manifested. Everybody may have been curious to know but they determined to await the next edition rather than take a chance on allowing Burt to tell about it.

The evil that men do lives after them as well as with them.

## KILLED IN WRECK

Melvin Buschue, of Mattoon, engineer on one of the New York Central fast trains, was killed on April 16, at Lovington, Ill., when the engine struck an automobile truck at a crossing. The engine left the track and ran for 1,000 feet before toppling over. Engineer Buschue attempted to climb down from the engine but was caught beneath coal of the engine tender and apparently smothered to death. Several passengers were slightly injured. The train was running at a speed of 55 miles an hour.

Engineer Buschue, who had been in service for 25 years, was a brother of Mrs. James Thorpe of this city.



## EASTER EGG HUNT AT LODGE



After two postponements, owing to weather conditions, and a near third postponement for the same reason, it was finally decided to have the hunt regardless of what the weatherman dished up.

This resolute attitude had its effect on the aforesaid weatherman. The hunt took place Sunday, April 22. It was a pretty, bright day but the weather was cool which did not deter a large crowd turning out. There were some 350 present and the children had

oodles of fun searching for the Easter eggs. Charles Auer, who managed the affair, had all kinds of souvenirs for the little folks. In every way the hunt was fully as successful as any previous undertaking of a similar character.

An Easter is a movable feast, it might be in order to suggest to the "movers" that next year they place it a little farther along in the calendar and give us a better break with the weather.

### Two Small Spitzers



Arlene Norma, age 5 years, and Marion Grady, age one year, children of Albert Spitzer, foreman of Automatic Machine Dept. Marion, at the left, registers 30 pounds of good nature and health.

Paul Andrews of the Sales Department, has had lots of fun and a varied experience driving an automobile, the last experience nearly costing him his new Nash.

At a party he was attending, one of the young ladies present was taken suddenly ill and Paul allowed her escort to take his machine and drive to her home on West Wood street. A few moments later he was called to the 'phone and told that his car had been stolen. By the time Paul reached the city, however, the car had by slim chance been recovered.

When the young man, to whom the car had been loaned, delivered the young lady at her home, a member of the family glancing from the window asked where the car was. That it had been stolen was evident. Some member of the family hurriedly jumped in a Ford and driving out of an alley between the blocks, plumped squarely into the young man in Paul's Nash. Owing to the fact that the ignition and choker were close together the would-be thief had flooded the engine and was unable to get the car under good headway. Seeing that he had been caught he leaped from the car without throwing it out of gear and disappeared between two houses. The man in pursuit succeeded in getting into the Nash and threw it out of gear. The car was not damaged.

### NEW MAN'S IMPRESSIONS

#### Mr. Riggs Tells How the Mueller Plant Appeared to Him

Thomas Riggs has taken a position in the advertising department, succeeding Edward Buck, who resigned and took a position with the Humphrey Company at Mansfield, Ohio. He becomes advertising manager of that company which makes vitreous ware.

Mr. Riggs is a Decatur boy and comes of a family of printers, commercial artists and advertisers.

Although he was born and reared in Decatur, he was wholly unacquainted with the magnitude of Mueller interests. Chaperoned by Mr. Langdon, he has made several trips through the factory and gives his impressions as follows:

What was my first impression of the Mueller plant? Well, I'll tell you, it was so darn much bigger than I had dreamed that I don't know how to describe it any other way. But I will say this, that the thing that impressed me most during my initial tour of the plant was the general satisfaction registered on the employees' faces. They seemed to be perfectly satisfied with their jobs, their salary, and their employers. In my mind that is the one essential in a successful manufacturing plant.

A thing that impressed me, too, was the size of the Mueller Co. I've lived in Decatur all my life and have known of Mueller's, known about their line, their National Advertising Campaigns, etc., but never have I realized the amount of ground the main plant covers, (and I have never visited the vitreous plant as yet), nor the amount of business that a plant of this size is capable of producing. I don't believe there are two people in ten in Decatur who can even begin to tell you anything about the Mueller Co. other than they are manufacturers of faucets and brass goods. It is an education in itself to make a personal tour of all departments, not rushing through just to get the location, but to take your time, stopping here and there to talk to the many experts in their line, to find what there is that lies behind that name, Mueller Co., I think you will be as agreeably surprised as I was, if not more so.



The work in the Tool Grinding Department in connection with the Brass Shop has been enlarged to include the grinding of new tools. In the past all new tools were ground in the Tool Room.

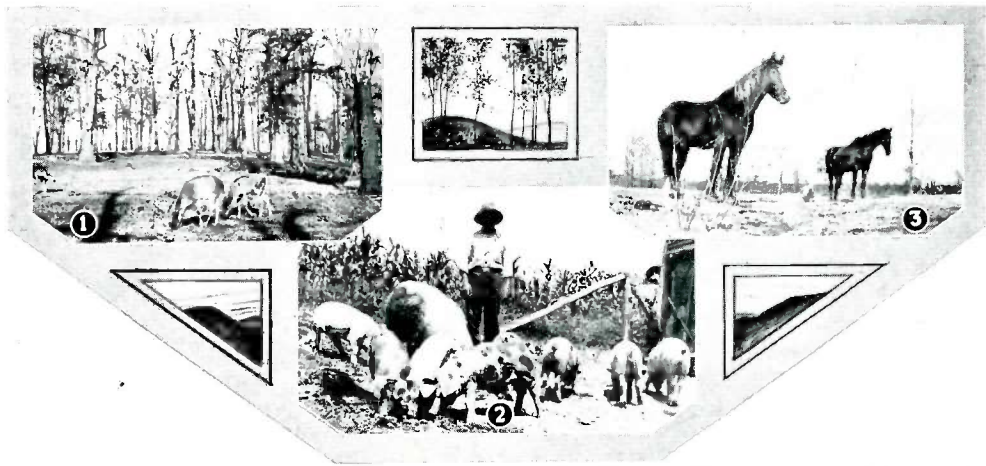


Harry Glenn of the Brass Shops, is laid up with a mashed finger. He was injured in trying out a new automatic machine.

T. E. McGill, who fell from the roof last December, has returned to work in the Construction Department.



## CAMERA CLUB



Animals were the subjects of the Camera Club for April. Margaret Marcott was awarded first prize. Helmuth Opalka got second and Ollie Springer got third.

### HOW TO AVOID RUPTURE

Last Friday afternoon at 4:30, George T. Stafford, of the Department of Physical Education of the University of Illinois, gave a demonstration in weight lifting to foundrymen and representatives of other departments who were present.

Mr. Stafford explained very clearly just what a rupture was and how it happened. Rupture or hernia is due to internal pressure which forces the intestines thru the body wall into the scrotum. If this internal pressure can be reduced or overcome the danger of hernia is very slight.

The posture or the position in which one sits or stands has a lot to do with this pressure. If a workman holds the lower abdomen up instead of letting it sag this pressure is reduced. Mr. Stafford demonstrated this very clearly.

Therefore, in lifting, the lower abdomen should be drawn in and the weight should be taken as much as possible on the legs and shoulders and not on the lower abdomen.

With these principles in mind much of the danger of hernia can be removed by thoughtful men who have lifting to do.

Some men have weaker body walls than others, but do not know it. It is important, therefore, that a man have a good physical examination and find out whether he is subject to hernia and then take corrective measures as advised by the doctor. A man's general physical condition is a factor in hernia. It emphasizes the importance once more of being in good condition and Dr. Long is here for the purpose of helping us get that way.

Henry Morey, our first aid man, will give this matter of posture and lifting special study. Call on him for help in this matter. The foremen will also co-operate.

Hernia is perhaps the greatest single accident hazard we have and it can be overcome by intelligent and persistent caution.



Martin Junior arrived at the home of Martin Stratman, foreman of Machine Shop, April 20, 1928. Weight 9 lbs., 3 oz.

A party of students from Stonington Community High School visited the Main Plant Friday morning, April 20. Groups was in charge of Miss Daisy Lind Scott, instructor in chemistry.

Marion Smith of Research Department, has gone on the road as a Mueller salesman.



### THIRTY-FOUR YEARS AGO

April 16, 1894, fell on Monday. On that particular morning a youth from southern Illinois started to work in Hieronymus Mueller's shop on Main street. He was Barney Marty. At that time there were fifteen men in the shop and he started in to grinding keys. Not long afterwards they put on a night shift and Barney was the first tester.

When Barney started in he got 10c an hour, worked ten hours a day, six days a week except Saturday when they quit at 5 o'clock but were paid for 60 hours. The 34th anniversary fell on Monday, April 16th and he is already thinking of the snowy summits of the distant Alps which he and Mrs. Marty hope to visit when the thirty-five years have been completed.

## GRAND CHILD



This is Wanda Ilene Reed, smiling and happy. She is the daughter of Mr. and Mrs. Harold Reid of Maroa, Illinois, and a granddaughter of Mrs. Anna Reed who works in the Club room. Wanda was five years old March 27.

## ATHLETICS

Indoor athletics are about over and now Director Cranston will turn his attention to outdoor activities. The indoor season has been the best of any since the club house was built. Many games of indoor baseball and volleyball have been played, and there has been a very keen rivalry between the teams. Mr. Cranston supplied the following record since his last report:

March 25, 1928. Mueller Panthers, 27; Flashes, 15. Score at half, 8 to 5 in favor of Flashes.

February 25, 1928. Junior Lions, 32; Cubs, 19. Panthers, 27; Flashes, 15.

March 27, 1928. Noonday Basketball

Feb 27. Giants, 27; Braves, 13.

Feb. 29. Giants, 14; Braves, 17.

March 1. Giants, 9; Braves, 20.

March 2. Giants, 23; Braves, 7.

March 5. Giants, 12; Braves, 13.

March 6. Giants, 13; Braves, 26.

March 8. Giants, 16; Braves, 13.

March 9. Giants, 32; Braves, 12.

March 12. Giants, 12; Braves, 11.

March 13. Giants, 24; Braves, 8.

March 14. Giants, 23; Braves, 22.

March 15. Giants, 17; Braves, 21.

March 16. Giants, 21; Braves, 28.

March 20. Giants, 15; Braves, 19.

March 27th. Noonday volleyball.

|                     |    |    |    |
|---------------------|----|----|----|
| Leaping Hyenas..... | 15 | 15 | 16 |
| Sky Pilots.....     | 7  | 10 | 7  |

The five o'clock volleyball players use the gym, Mondays, Tuesdays, Thursdays and Fridays. Many spirited games are played. Teams are made up of office and factory employees.

March 3rd. Night Hawks, 44; Clinton, 36.

March 3, 1928. Panthers, 22; Pump Co., 13.

March 3, 1928. Engineers, 27; Panthers, 23.

March 3, 1928. Night Hawks, 59; Drafters, 15.

Monday, March 5, 1928. C. B. & Q., 35; Engineers, 29.

March 8, 1928. Maroa, 26; Drafters, 25. Score at the half, 16 to 10 in favor of Maroa.

March 10, 1928. Sinkers, 13; Lions, 11. Score at half, 11 to 11.

March 10, 1928. Panthers, 31; Drafters, 23. Score at half, 19 to 15 in favor of Drafters.

March 10, 1928. Night Hawks, 28; Engineers, 14. Score at half, 12 to 10 in favor of Engineers.

March 10, 1928. A. W. Cash, 23; Panthers, 19. Score at half, 15 to 14 in favor of Panthers.

March 12, 1928. Engineers, 30; C. B. & Q., 16. Score at half, 21 to 6 in favor of Engineers.

March 15, 1928. Net Burners, 35; Sinkers, 5. Score at half, 14 to 4 in favor of Burners.

March 15, 1928. Kaufman Clothiers, 27; Indians, 26. Score at half, 9 to 8 in favor of Indians.

March 17, 1928. Panthers, 35; Engineers, 34. Score at half, 21 to 20 in favor of Engineers.

March 17, 1928. Panthers, 25; Pines, 21. Score at half, 16 to 11 in favor of Panthers.

March 17, 1928. Night Hawks, 28; "Y" Blackhawks, 23. Score at half, 12 to 10 in favor of Night Hawks.

March 19, 1928. "Y" Blackhawks, 33; Engineers, 27. Score at half, 21 to 5 in favor of Blackhawks.

March 22, 1928. Kaufman, 29; Mueller Indians, 24. Score at the half, 14 to 11 in favor of Indians.

March 26. C. B. & Q., 30; Mueller Engineers, 29. Score at the half, 16 to 12 in favor of C. B. & Q.

March 23. A. W. Cash Co., 36; Mueller Indians, 27.

March 24. D. H. S., 28; Mueller Indians, 26.



## MUELLER EMPLOYEES' HOMES

## Another Group Exemplifying Home Comfort Boon of Thrift

Another group of homes of Mueller employees is given on the opposite page as follows. Read from left to right beginning at top: C. O. Foster, Production Dept., 1325 W. Forrest; Louis Wyant, Machine Repair Dept., 1274 W. Forrest; E. J. Butt, assistant foreman in Machine Shop, 1085 East Prairie; Roy Pease, Engineering Dept., 1157 Rogers Ave; C. A. Walls, Pattern Dept., 1347 W. Decatur; W. G. Cranston, Physical Director, 1096 W. Eldorado; Roy Whittaker, chief foundry inspector, 1436 W. Macon.





# Mueller Employees Homes



### Wants to Know



Little Barbara Mayall, age 8 months, faces you with the inquiring look. She wants to know what it is all about. Barbara was born August 8, 1927, and not having had many pictures taken, is naturally inquisitive. She is the daughter of Bryan Mayall, Dept. 18.

### FINANCIAL STATEMENT

Employees' Aid Society, Feb. 23 to April 21, 1928

Feb. 23, Balance.....\$1,126.02

#### Receipts

Mueller Co., March.....\$ 50.00  
Mueller Co., April.....50.00  
Dues, March.....795.00  
Dues, April.....796.30  
Interest on Investments.....165.00

\$1,856.95

Total.....\$2,982.97

#### Payments

Death Benefits to  
B. F. Royse.....\$ 60.00  
J. L. Hodges.....100.00  
J. T. Duter.....150.00  
Flowers for above.....15.00  
Dr. Trainor, services.....10.00  
Emergency Loan Fund.....200.00  
Benefits listed below.....1,526.69

\$2,061.69

April 21, balance.....\$ 921.28

#### Resources

Bonds.....\$5,500.00  
Bldg. & Loan Stock.....800.00  
Emergency Loan Fund.....900.00  
Cash.....921.28

Total.....\$8,121.28

E. H. LANGDON, Treasurer.

### BENEFITS PAID

|                 |         |                 |            |
|-----------------|---------|-----------------|------------|
| Carl Marose     | \$ 9.00 | Lloyd Shallen-  |            |
| A. Carter       | 9.00    | berger          | 7.50       |
| G. B. Dant      | 40.00   | Effie Robinson  | 15.00      |
| Geo. W. Jobe    | 74.00   | Abner Shirk     | 20.00      |
| C. W. Danaha    | 12.50   | Theodosia Por-  |            |
| Wm. Kuntz       | 70.80   | ter             | 2.00       |
| C. T. Utt       | 1.25    | Jack Bohm       | 1.50       |
| Julius Heisler  | 9.00    | Walter Tucker   | 1.80       |
| Ruben Reunion   | 15.60   | Harry Bickers   | 12.00      |
| Harry Glenn     | 28.45   | Carl R. Morton  | 4.50       |
| Louise White-   |         | O. F. Henry     | 4.00       |
| head            | 2.00    | Wm. E. Bickers  | 18.00      |
| J. T. Sutliff   | 2.00    | Herbert Wag-    |            |
| Wm. H. Holly    | 17.40   | goner           | 12.50      |
| Marie Yonkers   | 9.00    | E. J. Dodwell   | 14.00      |
| J. E. Davis     | 23.20   | M. C. Harra-    |            |
| L. D. Elam      | 9.00    | han             | 33.00      |
| Wilbur Hud-     |         | M. Taylor       | 16.50      |
| dleston         | 6.00    | Clarence Wal-   |            |
| Millard Havice  | 15.00   | ton             | 1.80       |
| Carl Davidson   | 13.50   | Lawrence Boll   | 31.80      |
| Otto Cum-       |         | Creo Talley     | 9.00       |
| mings           | 39.90   | Dorothy Ostran- |            |
| Mrs. Katherine  |         | der             | 6.00       |
| Lizer           | 14.60   | O. D. Elliott   | 6.00       |
| T. E. McGill    | 13.65   | Wm. I. Heddin   | .75        |
| Ray J. Foster   | 10.80   | Lillian Schenk  | 5.00       |
| Harley Har-     |         | Clifford Roder- |            |
| ington          | 3.60    | ick             | 12.00      |
| D. Fletcher     | 54.00   | Walter Vail     | 3.60       |
| C. M. Trevil-   |         | Mrs. Ada Stolle | 12.00      |
| lion            | 7.20    | Louis Kavas     | 18.00      |
| Paul Stroyek    | 5.00    | Chas. Meador    | 10.00      |
| R. A. Henson    | 67.50   | Jerome Ed-      |            |
| Hazel Virden    | 2.00    | wards           | 22.00      |
| O. T. Workman   | 1.80    | Florence Way-   |            |
| C. J. Muller    | 15.00   | mire            | 2.49       |
| Orval German    | 12.75   | F. T. Mank      | 9.00       |
| Dora Albright   | 23.60   | Ella White      | 15.00      |
| Frank L. Tippit | 36.90   | Gus Bridgewa-   |            |
| W. L. Perkins   | 7.50    | ter             | 1.50       |
| W. H. Holly     | 36.90   | Walter Denton   | 9.00       |
| C. M. Gilbert   | 2.00    | L. Woods        | 3.75       |
| U. S. Friend    | 11.25   | Walter Coven-   |            |
| A. W. Gordon    | .75     | try             | 1.50       |
| Arthur Clay-    |         | L. B. McKinney  | 9.00       |
| pool            | 47.40   | C. Kuntz        | 8.30       |
| Geo. Tipsword   | 4.50    | C. E. Frost     | 30.00      |
| Ray F. Hardy    | 7.20    | F. A. Drake     | 10.00      |
| John Kalinski   | 51.30   | Maurice Dailey  | 12.00      |
| M. McLemore     | 5.00    | Wm. R. Ross     | 9.00       |
| S. A. Davis     | 3.00    | Oscar Dawdy     | 17.00      |
| G. W. Reisin-   |         | Norman Wyant    | 18.00      |
| ger             | 35.40   | D. M. Burke     | 1.00       |
| O. T. Brown     | 25.00   | L. L. Seeley    | 6.00       |
| John Matten-    |         | W. E. Robb      | 5.00       |
| glee            | 12.00   | C. M. Kemp-     |            |
| Joseph Bullard  | 21.20   | lin             | 10.50      |
| H. J. Linton    | 13.50   | O. R. Curry     | 33.00      |
| Glenn Reinhart  | 15.00   | W. F. Bainter   | 2.00       |
| Thos V. Buck    | 9.00    |                 |            |
| Clyde Hester    | 21.00   |                 |            |
| Donald E. An-   |         |                 |            |
| drews           | 9.00    |                 |            |
|                 |         | Total           | \$1,526.69 |